DATA ADMINISTRATION SPECIALIST

RESOURCE CATEGORY	Cybersecurity
RESOURCE KIND	Personnel
OVERALL FUNCTION	The Data Administration Specialist mitigates and responds to immediate and potential cyber threats.
COMPOSITION AND ORDERING SPECIFICATIONS	1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Cyber Incident Response Team). 2. Discuss logistics for deploying this position, such as working conditions, length of deployment, security, lodging, transportation, and meals, prior to deployment

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

COMPONENT	SINGLE TYPE	NOTES
DESCRIPTION	The Data Administration Specialist: 1. Develops and administers databases and data management systems that allow storage, query, and use of data 2. Responds to crises or urgent situations within the pertinent domain to respond to and mitigate immediate and potential cyber threats as part of the NIMS Type 1 Cyber Incident Response Team	Not Specified
EDUCATION	Not Specified	Not Specified
TRAINING	Completion of the following 1. IS-100: Introduction to Incident Command System, ICS-100 2. IS-200: Basic Incident Command System for Initial Response, ICS-200 3. IS-700: National Incident Management System, An Introduction 4. IS-800: National Response Framework, An Introduction 5. Database Administration Principles 6. Information Security Fundamentals and Essentials	Not Specified

COMPONENT	SINGLE TYPE	NOTES
EXPERIENCE	Agency Having Jurisdiction (AHJ)-documented and validated knowledge, skills, and abilities demonstrated in the following areas: 1. Data administration and data standardization policies and standards 2. Data backup, types of backups, and recovery concepts and tools 3. Data types: structured, unstructured, binary large object 4. Data mining and data warehousing principles 5. Different technologies for data storage including tape, optical, or disk 6. Data storage area networks (SAN) and the data file system tools 7. Network attached storage technologies 8. Database management systems, query languages, table relationships, and views 9. Digital rights management 10. Enterprise messaging systems and associated software 11. Network access, identity, and access management 12. Operating systems 13. Policy-based and risk adaptive access controls 14. Query languages such as Structured Query Language (SQL) 15. Sources, characteristics, and uses of the organization's data assets 16. Characteristics of physical and virtual data storage media 17. Database theory 18. Personally Identifiable Information (PII) and Payment Card Industry (PCI) data security standards 19. Database misconfiguration and vulnerabilities 20. Different database models such as relational versus object oriented 21. Industry standard database products, 22. Database encryption types 23. Database logging capabilities and techniques 24. Allocating storage capacity in the design of data management systems 25. Conducting queries and developing algorithms to analyze data structures 26. Designing and implementing databases and systems 27. Developing data dictionaries, models, and repositories 28. Generating queries and reports 29. Optimizing database performance 30. Data recovery mechanisms from various storage formats 31. Network attached storage technologies AHJ-validated experience demonstrated in the following areas: 1. Analyzing and defining data needs, specifications, and planning for anticipated changes in data capacity needs 2. Developing and implementing data mining and data warehousing programs 3. Network attached storage technologies (Continued)	The knowledge, skills, and abilities align with the National Initiative for Cyber Education (NICE) National Cybersecurity Workforce Framework.

COMPONENT	SINGLE TYPE	NOTES
EXPERIENCE	(Continued) 4. Developing data standards, policies, and procedures 5. Installing and configuring database management systems software 6. Maintaining database management systems software 7. Maintaining directory replication services that enable information to replicate automatically via optimized routing 8. Maintaining information exchanges through publish, subscribe, and alert functions that enable users to send and receive critical information 9. Managing the compilation, cataloging, caching, distribution, and retrieval of data 10. Monitoring and maintaining databases to ensure optimal performance 11. Performing backup and recovery of databases to ensure data integrity 12. Providing a managed flow of relevant information via web-based portals or other means, based on mission needs 13. Providing recommendations on new database technologies and architectures	
PHYSICAL/MEDICAL FITNESS	Light	The NIMS Guideline for the National Qualification System (NQS) defines Physical/Medical Fitness levels for NIMS positions.
CURRENCY	1. Functions in this position during an operational incident, planned event, exercise, drill, or simulation at least once every year 2. Background checks as applicable law permits and requires 3. Active security clearance	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within past 12 months; sex-offender registry check; and a local, state, and a local, state, and national criminal history.
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	1. Technical qualifications equivalent to Department of Defense Directive (DoDD) 8570 Level 2 certification 2. Database Administrator Certification (DAC) 3. Information Assurance Certification (IAC)	Not Specified

NOTES

Nationally typed resources represent the minimum criteria for the associated category.

REFERENCES

1. FEMA, NIMS 508: Cyber Incident Response Team
2. FEMA, National Incident Management System (NIMS), October 2017
3. FEMA, NIMS Guideline for NQS, November 2017
4. FEMA, National Response Framework, June 2016
5. National Initiative for Cybersecurity Education, National Cybersecurity Workforce Framework, v.2, May 2014
6. Department of Defense Directive (DoDD), 8570 and Global Assurance Information Certification (GAIC), January 2014